

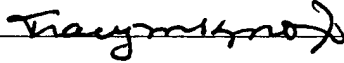
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Ibrahim Abdulhalim, et al.  
Title: Periodic Patterns And Technique To Control Misalignment Between Two Layers  
Application No.: 10/699,153 Filing Date: October 30, 2003  
Examiner: Unknown Group Art Unit: 1765  
Docket No.: TNCR.196US2 Conf. No.: 1463

Certificate of Mailing Under 37 CFR 1.8

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Signature



Commissioner for Patents  
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**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant(s) call(s) the documents listed on the enclosed Form PTO-1449 to the Examiner's attention in this patent application.

Copies of the documents listed on the accompanying Form PTO-1449 are enclosed.

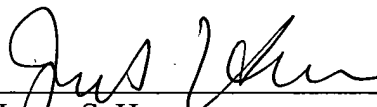
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Attorney Docket No.:  
TNCR.196US2

Application No.:  
10/699,153

This information disclosure statement is submitted under 37 C.F.R. § 1.97(b) and consequently no fee should be required. The Commissioner is authorized, however, to charge any fee that may be required, or to credit any overpayment, against Deposit Account No. 502664. This form is being submitted in duplicate.

Respectfully submitted,

  
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U.S. Department of Commerce, Patent and Trademark INFORMATION DISCLOSURE STATEMENT BY APPLICANT MAR 05 2004 PATENT & TRADEMARK OFFICE (Use several sheets if necessary)				<b>Atty. Docket No.</b> TNCR.196US2		<b>Application No.</b> 10/699,153	
				<b>Applicant(s)</b> Ibrahim Abdulhalim, et al.		<b>Conf. No.</b> 1463	
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<b>U.S. Patent Documents</b>							
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	1	4,103,998	Aug. 1, 1978	Nakazawa et al.			
	2	4,167,337	Sep. 11, 1979	Jaerisch et al.			
	3	4,631,416	Dec. 23, 1986	Trutna, Jr.			
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<b>U.S. Published Patent Application Documents</b>								
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
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	64	2003/0002043	Jan. 2, 2003	Abdulhalim et al.				
	65	2003/0020184	Jan. 30, 2003	Ballarin				
<b>Foreign Patent Documents</b>								
							Translation	
		Document	Date	Country	Class	Subclass	Yes	No
	66	WO03042629	May 22, 2003	WIPO				
	67	WO02/050509	Jun. 27, 2002	WIPO				
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	78	JP63-243804	Oct. 11, 1988	Japan			Abstract	
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	80	"Interferometric Method of Checking the Overlay Accuracy in Photolithographic Exposure Processes", IBM TDB, March 1990.						
	81	"Interferometric Measurement System for Overlay Measurement in Lithographic Processes", IBM TDB, Feb. 1994.						
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	84	“Automatic In-Situ Focus Monitor Using Line Shortening Effect”, Journal: Proceedings of the SPIE, vol. 3677, pt. 1-2. p. 184-93 (Abstract)	
	85	“Characterization and Monitoring of Variable NA and Variable Coherence Capable Photo Steppers Utilizing the Phase Shift Focus Monitor Reticule”, Journal: Proceedings of the SPIE, vol. 2439, p. 61-9. (Abstract)	
	86	“Modeling of Optical Scatterometry with Finite-Number-of-Periods Grating”, Journal: Proceedings of the SPIE, vol. 3743, p. 41-8. (Abstract)	
	87	“Grazing Incidence Diffraction By Laterally Patterned Semiconductor Nanostructures”, Journal: Journal of Physics, vol. 32 no. 6, p. 726-40. (Abstract)	
	88	“A Mask-to-Wafer* Alignment and Gap Setting Method for E-Ray Lithography Using Gratings”, Journal: Journal of Vacuum Science & Technology B. vol. 9, no. 6. p. 3202-6. (Abstract)	
	89	“Diffraction and Interference Optics for Monitoring Fine Dimensions in Device Manufacture”, Solid State Devices, 1983. (Abstract)	
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	93	“Optimal Sampling Strategies for sub-100 nm Overlay”, Rangarajan et al., SPIE, vol. 3332, p. 348-359.	
	94	“Super Sparse Overlay Sampling Plans: An Evaluation of Methods and Algorithms for Optimizing Overlay Quality Control and Metrology Tool Throughput”, Pellegrini et al., SPIE, vol. 3677, p. 72-82, March 1999.	
	95	“Comparison of Optical, SEM and SFM Overlay Measurement”, Jaiprakash and Gould SPIE. Vol. 3677, p. 229-238, March 1999.	
	96	“Formation of Periodic Diffraction Structures at Semiconductor Surfaces for Studying the Dynamics of Photoinduced Phase Transitions”, Fattakhov et al., Optics and Spectroscopy, vol. 89, p. 136-142 (2000)	
	97	Photoreactive Optical Properties of Volume Phase Gratings Induced in Sillenite Crystals, When The Grating Vector Lies on the (111) Plane”, Papzoglou et al., Applied Physics B 71, p. 841-848 (2000)	
	98	“Minimization of Total Overlay Errors on Product Wafers Using an Advanced Optimization Scheme”, Levinson et al., SPIE, p. 362-73. (Abstract)	

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	99	“A New Technique for Multiple Overlay Check”, Auzino et al., Microelectronic Engineering, p. 41-42. (Abstract)	
	100	“Alignment Mark Optimization to Reduce Tool and Wafer-Induced Shift for XTRA-1000”, Ina et al., Japanese Journal of Applied Physics, vol. 38, no. 12B, p. 7065-70. (Abstract)	
	101	“Towards the Optimal Design of Binary Optical Elements with Different Phase Levels Using a Method of Phase Mismatch Correction”, Kodate et al., Trends in Optics and Photonics, vol. 41, p. 174-6. (Abstract)	
Examiner		Date Considered	
<p><b>*EXAMINER:</b> Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.</p>			